REMARKS

This Amendment is submitted in response to the non-final Office Action mailed on June 18, 2009. No fee is due in connection with this Amendment. The Director is authorized to charge any additional fees which may be required, or to credit any overpayment to Deposit Account No. 02-1818. If such a withdrawal is made, please indicate the Attorney Docket No. 112857-711 on the account statement.

Claims 14-31 are pending in this application. Claims 1-13 were previously canceled without prejudice or disclaimer. In the Office Action, Claims 14-31 were rejected under 35 U.S.C. §103. In response, Claims 14 and 25-26 have been amended and Claim 15 has been canceled. These amendments do not add new matter. At least in view of the amendments and/or for the reasons set forth below, Applicants respectfully submit that the rejections should be withdrawn.

In the Office Action, Claims 14-17 and 25-26 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 7,125,131 B2 to Olczak ("*Olczak*") in view of U.S. Patent No. 5,592,332 to Nishio et al. ("*Nishio*"). In response, Applicants have amended independent Claims 14 and 25-26 and canceled Claim 15. In view of the amendments and/or for at least the reasons set forth below, Applicants respectfully submit that, even if combinable, the cited references fail to disclose or suggest each and every element of independent Claims 14 and 25-26 and Claims 15-17 that depend therefrom.

Currently amended independent Claims 14 and 25-26 recite, in part, an optical sheet comprising a plurality of lens elements provided successively in a row on one of principal faces of said optical sheet, wherein if a Z axis is taken in parallel to a normal line direction to said optical sheet and an X axis is taken in a direction of the row of said lens elements, a cross sectional shape in the XZ plane of each of said lens elements has a hyperboloidal or paraboloidal structure in which an entire surface of each of said lens elements satisfies the following expression: $Z = X^2/(R + \sqrt{(R^2 - (1 + K)X^2)}) + AX^4 + BX^5 + CX^6 + \ldots$ where R is the radius of curvature of a distal end vertex, K is a conic constant, and A, B, C, ... are aspheric coefficients, and wherein the radius R of curvature, the conic constant K and the aspheric coefficients A, B, C, ... satisfy the following numerical ranges: $R \geqq 0$, $K \leqq -1$, $0 < A < 10^{-3}$, and $0 \leqq B, C \ldots < 10^{-3}$. These amendments do not add new matter. The amendments are supported in the

Specification at, for example, page 2, paragraphs 28-41; page 4, paragraphs 77-83; page 5, paragraph 115; page 9, paragraph 165; page 10, paragraph 175, 180 and 185; page 11, paragraphs 190 and 201; page 12, paragraphs 204 and 216-219; page 13, paragraphs 220-222; Figs. 9-29. In contrast, the cited references fail to disclose or suggest every element of the presently pending claims.

For example, the cited references fail to disclose or suggest an optical sheet comprising a plurality of lens elements provided successively in a row on one of principal faces of said optical sheet, wherein <u>if a Z axis is taken in parallel to a normal line direction</u> to said optical sheet and an X axis is taken in a direction of the row of said lens elements, <u>a cross sectional shape in the XZ plane of each of said lens elements has a hyperboloidal or paraboloidal structure in which an entire surface of each of said lens elements satisfies the following expression:</u> $Z = X^2/(R + \sqrt{(R^2 - (1 + K)X^2)}) + AX^4 + BX^5 + CX^6 + \ldots$. The Patent Office asserts that *Olczak* teaches lens elements which satisfy the claimed equation. See, Office Action, page 2, lines 21-23; page 3, lines 1-6. However, contrary to the Patent Office's assertion, the "z" axis of *Olczak* is not taken <u>in parallel to a normal line direction</u> of the optical sheet. Instead, as shown in Fig. 3, the h axis is taken in parallel to a normal line direction of the optical sheet, whereas the z axis represents a perpendicular deviation from a straight reference line 128 (116) which is formed <u>at an angle to the normal line direction</u> of the optical sheet.

FIG. 3
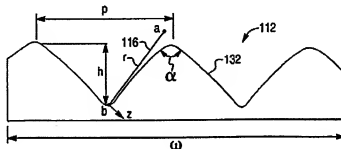
See, *Olczak*, column 3, lines 7-12; Fig. 3. The Patent Office relies on *Nishio* merely for the disclosure of lens elements generally having a hyperboloidal or paraboloidal structure along an entire surface. See, Office Action, page 3, lines 9-18. Nowhere does Nishio disclose or even suggest the claimed equation. Therefore, Applicants respectfully submit that the cited references

fail to disclose lens elements having a cross sectional shape that satisfies the claimed equation, wherein the Z axis is taken in parallel to a normal diner direction of the optical sheet.

Moreover, the cited references fail to disclose an optical sheet having a plurality of lens elements, wherein a cross sectional shape in the XZ plane of each of said lens elements has a hyperboloidal or paraboloidal structure in which an entire surface of each of said lens elements satisfies the following expression: $Z = X^2/(R + \sqrt{(R^2 - (1 + K)X^2)}) + AX^4 + BX^5 + CX^6 +$

...where R is the radius of curvature of a distal end vertex, K is a conic constant, and A, B, C, ... are aspheric coefficients, and wherein the radius R of curvature, the conic constant K and the aspheric coefficients A, B, C, ... satisfy the following numerical ranges: $R \geqq 0$, $K \leqq -1$, $0 < A < 10^{-3}$, and $0 \leqq B, C ... < 10^{-3}$ as recited, in part, by independent Claims 14 and 25-26. The Patent Office asserts that *Olczak* discloses variables that satisfy the claimed ranges. See, Office Action, page 3, lines 19-20. However, directly contrary to the Patent Office's assertion, the portion of *Olczak* relied on by the Patent Office expressly teaches that k is greater than -1 and less than or equal to zero. See, *Olczak*, column 3, lines 13-16 ("Here the coefficients of the polynomial may have the following approximate ranges. . . -1 < k or less than or equal to zero"). As such, *Olczak* fails to disclose or suggest that the radius R of curvature, the conic constant K and the aspheric coefficients A, B, C, ... satisfy the following numerical ranges: $R \geqq 0$, $K \leqq -1$, $0 < A < 10^{-3}$, and $0 \leqq B, C ... < 10$ as required, in part, by the present claims.

Nishio also fails to disclose that the radius R of curvature, the conic constant K and the aspheric coefficients A, B, C, ... satisfy the following numerical ranges: $R \geqq 0$, $K \leqq -1$, $0 < A < 10^{-3}$, and $0 \leqq B, C ... < 10$. *Nishio* merely discloses forming a plurality of convex or concave lens elements on the surface of a light transmitting substrate. See, *Nishio*, column 1, lines 53-67. Nowhere does *Nishio* teach or suggest that its lens elements satisfy the claimed numerical ranges, nor does the Patent Office cite support for such claimed elements. Therefore, the cited references fail to disclose an optical sheet comprising a plurality of lens elements provided, wherein a cross sectional shape in the XZ plane of each of said lens elements has a hyperboloidal or paraboloidal structure in which an entire surface of each of said lens elements satisfies the

following expression: $Z = X^2/(R + \sqrt{(R^2 - (1 + K)X^2)}) + AX^4 + BX^5 + CX^6 + ...$ where R is the radius of curvature of a distal end vertex, K is a conic constant, and A, B, C, ... are aspheric coefficients, and <u>wherein the radius R of curvature, the conic constant K and the aspheric coefficients A, B, C, ... satisfy the following numerical ranges: $R \geqq 0$, $K \leqq -1$, $0 < A < 10^{-3}$, and $0 \leqq B, C ... < 10^{-3}$</u> in accordance with the present claims.

Moreover, one of ordinary skill in the art would have no reason to combine the cylindrical lens elements of *Nishio* with the optical sheet of *Olczak* to achieve an entire surface of the lens elements that satisfies the claimed expression, since neither reference teaches that it is beneficial to provide a lens element whose entire surface satisfies the claimed expression. Instead, *Olczak* teaches that the upper portion of the lens elements near the vertex is <u>a linear segment</u> and repeatedly refers to a "<u>peak angle</u>" of its "<u>prisms</u>," thus indicating that the lens elements are not entirely hyperboloidal or paraboloidal. See, *Olczak*, column 2, lines 54-67; column 3, lines 1-66. Likewise, *Nishio* teaches that concave and triangular prism elements are interchangeable as separate embodiments of its invention, not that one is more beneficial than the other. See, *Nishio*, column 6, lines 56-65; column 7, lines 14-20; column 13, lines 1-23.

Accordingly, Applicants respectfully request that the rejection of Claims 14-17 and 25-26 under 35 U.S.C. §103(a) to *Olczak* and *Nishio* be withdrawn.

In the Office Action, Claims 18-24 and 27-31 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Olczak* in view of *Nishio* and further in view of U.S. Patent No. 6,332,691 B2 to Oda et al. ("*Oda*").

As discussed previously, the combination of *Olczak* and *Nishio* fails to disclose or suggest a plurality of cylindrical lens elements wherein: (1) if <u>a Z axis is taken in parallel to a normal line direction to said optical sheet</u> and an X axis is taken in a direction of the row of said cylindrical lens elements, <u>a cross sectional shape in the XZ plane</u> of each of said cylindrical lens elements <u>satisfies the following expression</u>: $Z = X^2/(R + \sqrt{(R^2 - (1 + K)X^2)}) + AX^4 + BX^5 + CX^6 + ...$, where R is the radius of curvature of a distal end vertex, K is a conic constant, and A, B, C, ... are aspheric coefficients; and (2) <u>wherein the radius R of curvature, the conic constant K and the aspheric coefficients A, B, C, ... satisfy the following numerical ranges: $R \geqq 0$, $K \leqq -1$, $0 <$</u>

$A < 10^{-3}$, and $0 \leqq B, C \ldots < 10^{-3}$ as required, in part, by independent Claim 14 from which

Claims 18-24 depend. The Patent Office relies on *Oda* merely for the disclosure of forming

convex portions on the face of the optical sheet opposite the face on which the cylindrical lens

elements are provided. See, Office Action, page 5, lines 7-23; page 6, lines 1-2. Thus,

Applicants respectfully submit that *Oda* fails to remedy the deficiencies of *Olczak* and *Nishio*.
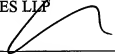
Accordingly, Applicants respectfully request that the rejection of Claims 18-24 and 27-31

under 35 U.S.C. §103(a) to *Olczak, Nishio* and *Oda* be reconsidered and withdrawn.

For the foregoing reasons, Applicants respectfully submit that the present application is

in condition for allowance and earnestly solicits reconsideration of same.

Respectfully submitted,

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